

ABSTRACT

A portable electronic device with power failure recovery, powered by a main power source, the device comprising a power detection module, a processor, a timing unit and a power management unit. The power detection module detects an output characteristic from the main power source and asserts an interrupt signal if the characteristic is below a threshold value. The processor asserts a turn-off signal and an enable signal in response to the interrupt signal. The timing unit asserts a notification signal at a predetermined time interval when the enable signal is asserted. Upon receipt of the turn-off signal, the power management unit disconnects the main power source to a circuit block with high power consumption. Moreover, the power management unit reconnects the main power source to the circuit block when the notification signal is asserted and the output characteristic of the main power source is beyond the threshold value.